

DEPARTMENT OF GENERAL SERVICES

TELECOMMUNICATIONS DIVISION

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September 12, 1997

Mr. William F. Caton, Acting Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554-0001

Dear Mr. Caton:

The State of California herein submits an original and nine copies of its comments relative to the Notice of Proposed Rulemaking in the matter of ET Docket 97-157.

If you have any questions or require further information, please contact Mr. Glen Nash, Senior Engineer, at (916) 657-9454.

Sincerely,

A handwritten signature in cursive script that reads 'Pete Wanzanried'.

PETE WANZENRIED
Chief, Public Safety Radio Services

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Enclosures

10/21/97 [illegible] 049

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC

In the Matter of)
)
Reallocation of Television Channels)
60-69, The 746-806 MHz Band)

ET Docket 97-157

To the Commission:

COMMENTS OF THE STATE OF CALIFORNIA

1. The State of California (State), as represented by the California Department of General Services-Telecommunications Division, herein submits its comments on the above captioned proceeding.
2. The Telecommunications Division is responsible for the design, installation, and maintenance of land mobile radio communications systems used by the various state public safety agencies. It serves as the central point of contact for matters related to regulatory issues before the Commission.

3. The State applauds the alacrity with which the Commission has moved forward to satisfy the spectrum needs identified in the final report of the Public Safety Wireless Advisory Committee (PSWAC). The State was an active participant in the PSWAC process and fully supports the spectrum requirements identified in that report. In particular, the State has been reviewing its own spectrum requirements and has found the availability of spectrum within California to be woefully inadequate, especially in the Los Angeles and San Francisco Metropolitan areas.

4. While the State is not a direct member of the National Public Safety Telecommunications Council (NPSTC), it is a member of several of the organizations which are direct members. The State fully supports the comments submitted by NPSTC in the above captioned matter.

5. As previously mentioned, the State has been reviewing its own spectrum requirements through the year 2010. As a result of this study, a report entitled "Partnering for the Future: A Strategic Plan for California's Public Safety Radio Communications" has been prepared. This report identifies several spectrum related deficiencies including a lack of adequate spectrum to meet the current voice communications needs of state agencies, a lack of adequate spectrum to implement commonly available digital technologies such as mobile data terminals, and a lack of adequate spectrum to implement future technologies such as those proposed under the NCIC 2000 initiative. The report further recommends implementation of shared radio systems which would satisfy the communications needs of several state agencies as a

means of limiting the infrastructure costs associated with building statewide radio systems. Finally, the report identifies the fact that within California there is no spectrum currently allocated which is capable of meeting the State's spectrum needs due to existing over-crowding.

6. Not only is the availability of spectrum a problem in the Los Angeles and San Francisco Metropolitan Areas where there simply is no spectrum available for use by any agency, it also is a problem for State agencies in the more rural areas of California where there is no commonality amongst the spectrum which is available. In many cases, past efforts to improve interoperability in various parts of California have resulted in individual agencies within an area "congregating" in one portion of the spectrum, thereby fully loading the selected band and leaving other bands virtually unused. Meanwhile, agencies in other parts of the state have "congregated" in other portions of the spectrum. Thus, while VHF Highband (150-174 MHz) may be the band of choice in one part of the state, thereby leaving UHF channels (450-470 MHz) available for use, in another part of the state UHF is the band of choice and VHF channels are unused. This lack of commonality in the availability of spectrum presents a unique problem for state agencies. Oftentimes, state personnel need to "roam" over large portions of the state in the normal conduct of their business. In other circumstances, the State needs to move personnel from one area of the state to another in response to some emergent situation (fire, flood, civil disturbance, etc.). As a result, State agencies need radio systems which will operate in any and all portions of the state. Satisfying this

requirement is dependent upon having access to radio spectrum which is common throughout the state.

7. The State strongly supports the allocation of the 746-806 MHz spectrum as providing a very useful resource to the greater public safety community for meeting critical shortfalls in communications capability. As it looks at the prospects of building a statewide communications system in this spectrum for its own use, the State wishes there were spectrum also being made available in the lower bands which would be more appropriate to the wide area nature of statewide communication systems. In particular, the wide diversity in topography, land use factors, and weather conditions found in California will present daunting problems which must be overcome in designing a statewide communications systems which is capable of meeting the needs of State agencies in all parts of the state. Solutions to these problems are not easily found as many commercial providers (cellular companies, etc.) have discovered as they expand their systems into the more rural and remote areas of the state. Nevertheless, the State is moving forward in developing plans to utilize this spectrum to satisfy its own communications needs into the future.

8. The State is particularly concerned about the fact that this allocation does not provide any spectrum relief in the Los Angeles and San Francisco areas until sometime after 2006. This is due to the fact that with the exception of channel 67 in the Los Angeles area and channel 69 in the San Francisco area, every one of the channels is allocated for either analog or digital television service in these areas. This lack of

spectrum relief in the two most populated areas of California is unacceptable.

Furthermore, reports of a “go-slow” attitude amongst the broadcasters toward implementing digital services presents the very disturbing prospect that spectrum relief in these areas of the state may, in fact, not occur until well after 2006. For this reason, the State strongly encourages the Commission to take a pro-active posture in ensuring that broadcasters clear the TV60-69 spectrum, sooner rather than later relative to the 2006 target date. Toward this end, we recommend that the Commission:

- a) Immediately cancel all television allocations for analog stations for which a construction permit has not been issued.
- b) Immediately cancel all television construction permits for which the applicant cannot show a purchase order for the transmitter which cannot be canceled or modified.
- c) Modify all existing licenses for analog stations to show a license expiration date of December 31, 2006. Similarly, for all digital station licenses to be issued in the future, show a license expiration date of December 31, 2006.
- d) Require that all analog station licensees operating in the TV60-69 spectrum provide annual reports on their progress toward implementing the digital technology.
- e) Provide incentives for analog station licensees to move off of the TV60-69 spectrum. One alternative for this might be to allocate a portion of the moneys received from the possible auction of the 746-806 MHz spectrum toward

reimbursement of a licensee's costs for relocating. If implemented, the Commission might consider allocating this reimbursement on a sliding scale, with higher amounts reimbursed for early relocation as opposed to no reimbursement for relocation after 2006.

f) Allow for new users to compensate existing broadcast users for reasonable relocation expenses. While the State does not propose that public safety users be required to compensate television licensees for relocating to other spectrum, it does NOT believe the Commission should prohibit such compensation if a governmental entity should choose that as a method of implementing a needed public safety communications system in a timely manner.

g) Conduct an annual review of the spectrum which has been cleared as the result of television licensees completing conversions to digital operation and/or ceasing operation with an eye toward relocating those digital television allocations within the 746-806 MHz band to other spectrum as soon as possible. In particular, those digital television allocations which are within the proposed public safety allocations should receive the highest priority for relocation.

9. The importance of finding spectrum for Los Angeles and San Francisco cannot be overstated. The lack of any solution to currently existing critical communications problems before 2006 is unacceptable. As an example of how critical the problem is--- in Los Angeles, the California Highway Patrol is experiencing channel usage factors on

their existing radio system of 55+ minutes per hour. While it might seem that there is still 5 minutes of usage available, in actuality this is an indication that the channels are grossly overloaded. When usage becomes this high in a dispatch system, some individual users begin to prioritize their use of the radio by cutting back on the types of calls that they make. Other users simply give-up on making a call out of frustration. Thus, this high of a usage rate also indicates that there is a significantly high "dropped call" rate. What does this mean to the officer on the street? He/she does not get an opportunity to verify driver's license and vehicle registration information against the state records when they make a stop, thereby possibly losing an opportunity to capture a wanted individual or recover a stolen vehicle. Furthermore, he/she is losing an opportunity to conduct a quick check on a vehicle prior to walking up to speak with the driver and passengers. This places the officer in a potentially hazardous situation because they are unable to access information about the vehicle which may be in the record system but is not readily available to the officer in the field---the vehicle may fit the description of recent crime, it may belong to a known felon, it may be stolen. To deny the officer access to this information is unconscionable.

10. The State also is concerned about the lack of spectrum relief in Los Angeles and San Francisco from the aspect of the shared usage system it is contemplating building as a result of the report discussed in paragraph 5 above. While the Los Angeles and San Francisco Metropolitan Areas are the areas of greatest need and while the State would want to begin construction of any new system in the area of greatest need, it is

possible that construction could begin in other, lesser spectrum impacted areas. However, to convince the Governor and Legislature that they should fund a system estimated to cost in excess of \$1.4 Billion, and to convince the State's operational commanders that they should support such a system without some **guarantee** that construction could, in fact, begin in Los Angeles and San Francisco during early 2007 would not be possible. Furthermore, the consequences arising from the State beginning construction on such a system only to be stymied by a slower-than-expected migration of broadcasters out of the proposed spectrum would be unthinkable.

11. While the State endorses the allocation of 24 MHz of spectrum in the 746-806 MHz band as being a significant step forward in meeting the spectrum needs of public safety users through the year 2010, it is only a first step. The PSWAC report identified a need for 25 MHz immediately with another 70 MHz being needed in 10-15 years. Furthermore, the PSWAC report identified an immediate need for 2.5 MHz of spectrum below 512 MHz for interoperability purposes amongst federal, state, and local users and amongst users from police, fire, EMS, and other public safety disciplines. This need for interoperability is not satisfied by the proposed spectrum. We encourage the Commission to continue to seek spectrum which will satisfy this critical unmet need.

12. The State also endorses the allocation of channels 63, 64, 68, and 69 (764-776 and 794-806 MHz) as being the best allocation for public safety purposes. This spectrum offers the transmit-receive separation (30 MHz) needed for efficient operation of the mobile relay systems which will be required for coverage reasons in virtually all

public safety systems constructed in this band. Furthermore, considering the proximity of this band to the existing public safety allocations in the 806-869 MHz band, the State concurs with recommendations contained in the NPSTC comments that the 794-806 MHz segment be designated for "Mobile Only" and that the 764-776 MHz segment be designated for "Fixed and Mobile". Configuration of the two public safety segments in this manner will facilitate interoperability with the existing 800 MHz public safety systems. While we have some concerns about the ability of radios and antennas to operate effectively over the entire 764-869 MHz range (the bottom of TV channel 63 to the top of the existing NPSPAC allocation), we are confident that mobile and portable transmitters will be able to easily span the 794-824 MHz (bottom of TV channel 68 to the top of the NPSPAC "Mobile Only" allocation) segment of the band. Thus, users will be able to access mobile relays in either the new spectrum or the old 800 MHz spectrum from a single radio. Adaptive tuning of receiver front-ends and the lesser impact of antenna mis-matches should make operation of mobile and portable receivers in the 764-776 and 851-869 MHz segments of the band easier to accomplish.

13. The State also concurs with the NPSTC analysis that permitting broadcast stations, particularly high power broadcast stations, to continue operation on channels immediately adjacent to the public safety allocations is an incompatible usage. The out-of-band emissions from such stations will unacceptably degrade the performance of receivers operating in the public safety portions of the band and the "constant carrier"

nature of broadcast signals will contribute to intermodulation interference problems greater than those expected from land mobile type operations.

14. In conclusion, the State commends the Commission for its efforts in meeting the critical communications needs of the public safety community and supports allocation of the 764-776 and 794-806 MHz spectrum as the first step toward satisfying the spectrum requirements identified in the PSWAC process. Nonetheless, the State notes the lack of any spectrum relief in the two largest metropolitan areas of California and encourages the Commission to continue to seek solutions for these areas. The clearing of broadcasters out of this spectrum is critically needed and such clearing needs to occur sooner rather than later---eight years is too long a period of time to have to wait for spectrum relief.

Respectfully submitted,

A handwritten signature in cursive script, reading "Pete Wanzanried".

Pete Wanzanried
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Sacramento, California 95814-0282